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WEST Search History

DATE: Wednesday, September 10, 2003

<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
	side by side		result set
<i>DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=OR</i>			
L4	L1 same (size or micron or diameter) and (bone) adj3 (graft or prosthesis or implant or fixative)	42	L4
L3	L2 and matrix same (polylactide or polyglycolide or polyanhydride or polyortheester or polyurethane or polyvinyl or pvp)	13	L3
L2	L1 and (bone) adj3 (graft or prosthesis or implant or fixative)	80	L2
L1	(bioactive or bioceramic) adj5 glass same (particulate or particle or microparticle)	196	L1

END OF SEARCH HISTORY

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(FILE 'HOME' ENTERED AT 11:04:14 ON 20 NOV 2002)

FILE 'CPLUS, MEDLINE' ENTERED AT 11:04:30 ON 20 NOV 2002
L1 81592 SEA ABB=ON PLU=ON (IMPLANTS OR BIACTIVE COMPOSITE OR BONE
FIXATION OR BONE FIXTURES)
L2 2067 SEA ABB=ON PLU=ON L1 AND (BONE IMPLANT)
L3 0 SEA ABB=ON PLU=ON L2 AND (RESORBABLE POLYMER (3A) MATRIX)
L4 0 SEA ABB=ON PLU=ON L2 AND POLYMER (3A) MATRIX (P) (FIBRILLAR
OR ORIENTED)
L5 2 SEA ABB=ON PLU=ON L2 AND POLYMER (P) (FIBRILLAR OR ORIENTED)
L6 97 SEA ABB=ON PLU=ON L2 AND (BIOCERAMIC OR BIOGLASS)
L7 1 SEA ABB=ON PLU=ON L6 AND POLYMER (P) (FIBRILLAR OR ORIENTED)

D L7 IBIB KWIC
L8 0 SEA ABB=ON PLU=ON L6 AND POLYMER MATRIX
L9 0 SEA ABB=ON PLU=ON L6 AND (POLYMER MATRIX)
L10 0 SEA ABB=ON PLU=ON L6 AND (FIBER OR FIBROUS) (P) POLYMER
L11 8 SEA ABB=ON PLU=ON L6 AND POLYMER
L12 8 SEA ABB=ON PLU=ON L11
L13 8 DUP REM L11 (0 DUPLICATES REMOVED)
D L13 IBIB- KWIC 1-

L7 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1997:286407 CAPLUS
 DOCUMENT NUMBER: 126:268549
 TITLE: Osteosynthetic material, composited implant material,
 and process for preparing the same
 INVENTOR(S): Shikinami, Yasuo; Okuno, Masaki
 PATENT ASSIGNEE(S): Takiron Co., Ltd., Japan; Shikinami, Yasuo; Okuno,
 Masaki
 SOURCE: PCT Int. Appl., 104 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9710010	A1	19970320	WO 1996-JP2642	19960913
W: AU, CA, CN, KR, NO, US				
RW: AT, CH, DE, DK, ES, FI, FR, GB, IT, NL, SE				
JP 09135892	A2	19970527	JP 1996-216874	19960731
JP 3215046	B2	20011002		
JP 09234242	A2	19970909	JP 1996-216875	19960731
JP 3215047	B2	20011002		
JP 09234243	A2	19970909	JP 1996-216876	19960731
JP 3239127	B2	20011217		
JP 11226111	A2	19990824	JP 1998-321413	19960731
JP 2002325832	A2	20021112	JP 2002-129488	19960731
CA 2205231	AA	19970320	CA 1996-2205231	19960913
AU 9669453	A1	19970401	AU 1996-69453	19960913
AU 715915	B2	20000210		
EP 795336	A1	19970917	EP 1996-930407	19960913
R: AT, CH, DE, DK, ES, FI, FR, GB, IT, LI, NL, SE				
CN 1168105	A	19971217	CN 1996-191435	19960913
NO 9702191	A	19970714	NO 1997-2191	19970513
US 5981619	A	19991109	US 1997-849422	19970514
PRIORITY APPLN. INFO.:				
		JP 1995-262353	A	19950914
		JP 1995-351503	A	19951225
		JP 1995-351504	A	19951225
		JP 1996-216874	A	19960731
		JP 1996-216875	A	19960731
		JP 1996-216876	A	19960731
		JP 1998-321413	A3	19960731
		WO 1996-JP2642	W	19960913

AB The inventions relate to a high-bending-strength and high-d.
 osteosynthetic material and a high-strength implant material, comprising
 either a biodegradable and bioabsorbable cryst. thermoplastic
polymer material or a composite material comprising the above
polymer material and a **bioceramic** powder having a
 particle diam. of 0.2 to 50 .mu.m dispersed therein, wherein crystals of
 the **polymer** material are pressure-**oriented** essentially
 parallel to a plurality of ref. axes rather than uniaxially; and a process
 for prep. the above materials by pressure orientation, comprising prep.
 either a biodegradable and bioabsorbable cryst. thermoplastic
polymer material or a mixt. comprising a dispersion of a
 biodegradable and bioabsorbable cryst. thermoplastic **polymer**
 material and a dispersion of a **bioceramic** powder, melt-forming
 the mixt. into a preform, and pressure filling the preform into a cavity
 of a closed mold to prep. an **oriented** form. This process
 enables the prepn. of ideal biomaterials, i.e., an osteosynthetic material
 and an implant material comprising an **oriented** form with
 crystals **oriented** parallel to a plurality of ref. axes and

possessing low anisotropy, high denseness, and high strength, which have suitable hydrolyzability, can retain satisfactory strength for a period of time necessary for bone coaptation and, after the recovery of the fractured portion, is degraded and adsorbed at such a rate as will not cause any inflammation, thus eliminating the need to conduct reoperation.

ST osteosynthetic composited implant material; thermoplastic
bioceramic prosthetic implant

IT **Bone**

Bone

(**implant**; osteosynthetic material, composited implant
material, and process for prep. the same)

IT Dental materials and appliances

Prosthetic materials and Prosthetics

(**implants**; osteosynthetic material, composited implant
material, and process for prep. the same)

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YOU HAVE REQUESTED DATA FROM 8 ANSWERS - CONTINUE? Y/(N):y

L13 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:323651 CAPLUS
DOCUMENT NUMBER: 135:157450
TITLE: Achievements in ceramic biomaterials
AUTHOR(S): Veresov, A. G.; Putlyaeve, V. I.; Tret'yakov, Yu. D.
CORPORATE SOURCE: Fak. Nauk o Mater., MGU im. M. V. Lomonosova, Moscow,
119899, Russia
SOURCE: Rossiiskii Khimicheskii Zhurnal (2000) 44(6), 32-45
CODEN: RKZHEZ; ISSN: 1024-6215
PUBLISHER: Rossiiskoe Khimicheskoe Obshchestvo im. D. I.
Mendeleeva
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Russian
AB A review with 96 refs. providing a brief description of the properties and physiol. of bone, calcium phosphate biomaterials based on CaO-P2O5-H2O systems, producing hydroxyapatite powders, **bioceramics** based on "pure" hydroxyapatite, dense hydroxyapatite ceramics, porous hydroxyapatite ceramics, ceramic composites, glass ceramic materials based on hydroxyapatite, hydroxyapatite coatings for metals, hydroxyapatite/**polymer** composites, calcium phosphate bone cements, and prospects for new developments in the field of **bone implants**.
ST review **bone implant bioceramic** material
IT Bone
(**implant**; achievements in ceramic biomaterials)

L13 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:319273 CAPLUS
DOCUMENT NUMBER: 133:256717
TITLE: Collagen-**polymer**-hydroxyapatite composite materials
AUTHOR(S): Andronescu, Ecaterina; Momete, Daniela Cristina;
Vasilescu, D. S.
CORPORATE SOURCE: Department of Industrial Chemistry, University
"Politehnica" of Bucharest, Bucharest, Rom.
SOURCE: Silicates Industriel (1999), 64(11-12), 187-190
CODEN: SIINAT; ISSN: 0937-5225
PUBLISHER: Silicates Industriel
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Collagen-**polymer**-hydroxyapatite composite materials
AB The design of ceramic-**polymer** composite offers the possibility of combining the advantageous properties of **bioceramics** like hydroxyapatite with the molding capacity of biocompatible polymeric systems. To improve the synthetic **bone implant** material, hydroxyapatite coated with collagen, acrylamide crosslinked with bis-methylene acrylamide was produced. A new, rigid composite material was obtained by mixing all the above components in soln. and curing it. The usefulness of this new material was also evaluated.
ST collagen **polymer** hydroxyapatite composite
IT Prosthetic materials and Prosthetics
Prosthetic materials and Prosthetics
(ceramic, **implants**; collagen-**polymer**-hydroxyapatite composite materials)
IT Compressive strength
(collagen-**polymer**-hydroxyapatite composite materials)
IT Collagens, biological studies
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

IT (collagen-**polymer**-hydroxyapatite composite materials)
IT Prosthetic materials and Prosthetics
(composites; collagen-**polymer**-hydroxyapatite composite materials)
IT Ceramics
(prosthetic **implants**; collagen-**polymer**-hydroxyapatite composite materials)
IT 10124-37-5, Calcium nitrate 25034-58-6, Acrylamide-methylenebisacrylamide copolymer
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(collagen-**polymer**-hydroxyapatite composite materials)
IT 1306-06-5, Hydroxyapatite
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(collagen-**polymer**-hydroxyapatite composite materials)
IT 7783-28-0, Diammonium phosphate
RL: RCT (Reactant); RACT (Reactant or reagent)
(collagen-**polymer**-hydroxyapatite composite materials)

L13 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:193594 CAPLUS
DOCUMENT NUMBER: 132:241729
TITLE: Bioactive coatings on **polymers**
AUTHOR(S): Meyer, M.; Schubert, H.
CORPORATE SOURCE: Institut fur Nichtmetallische Werkstoffe, Berlin, Germany
SOURCE: Werkstoffwoche '98, Band VIII: Symposium 10, Polymere; Symposium 14, Simulation Polymere, Munich, Sept., 1998 (1999), Meeting Date 1998, 177-180. Editor(s): Michaeli, Walter. Wiley-VCH Verlag GmbH: Weinheim, Germany.
CODEN: 68SRAZ
DOCUMENT TYPE: Conference; General Review
LANGUAGE: German
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Bioactive coatings on **polymers**
AB A review with 2 refs., describing medical application of **bioceramics**, Ca phosphate and oxide ceramics (Al, Zr) as **bone implants**, silicone **implants** for smooth tissues, and coating of silicone with bioactive hydroxylapatite or tricalcium phosphate by radio frequency glow discharge.
ST review **polymer** bioactive coating silicone implant
IT Coating materials
(bioactive coatings on **polymers**)
IT **Polymers**, biological studies
Polysiloxanes, biological studies
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(bioactive coatings on **polymers**)
IT Ceramics
(biocompatible; bioactive coatings on **polymers**)
IT Prosthetic materials and Prosthetics
(**implants**; bioactive coatings on **polymers**)

L13 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:706058 CAPLUS
DOCUMENT NUMBER: 129:321234
TITLE: Biodegradable implant material comprising bioactive ceramic
INVENTOR(S): Boyan, Barbara D.; Niederauer, Gabriele; Kieswetter,

PATENT ASSIGNEE(S): Kristine; Leatherbury, Neil C.; Greenspan, David C.
 USA
 SOURCE: PCT Int. Appl., 44 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

not filed on/after 11/29/00.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9846164	A1	19981022	WO 1998-US7446	19980413
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5977204	A	19991102	US 1997-838921	19970411
AU 9869702	A1	19981111	AU 1998-69702	19980413
EP 1018978	A1	20000719	EP 1998-915544	19980413
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002508677	T2	20020319	JP 1998-544187	19980413
PRIORITY APPLN. INFO.:			US 1997-838921	A 19970411
			WO 1998-US7446	W 19980413

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB Biodegradable polymeric therapeutic implant materials incorporating bioactive ceramics such as **Bioglass** are provided. These **implants** provide increased mech. properties and pH control, enabling the use of these materials to design porous and nonporous therapeutic **implants** used as cell scaffolds for healing of tissue defects or fixation devices, having desired degrdn. times, mech. properties, elasticity and biocompatibility.
 ST **bone implant polymer** ceramic biodegradable; prosthetic implant ceramic biodegradable
 IT **Polymers**, biological studies
 RL: DEV (Device component use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (biodegradable implant material comprising bioactive ceramic)
 IT Prosthetic materials and Prosthetics
 (ceramic, **implants**; biodegradable implant material comprising bioactive ceramic)
 IT **Bone**
 (**implant**; biodegradable implant material comprising bioactive ceramic)
 IT Prosthetic materials and Prosthetics
 (**implants**; biodegradable implant material comprising bioactive ceramic)
 IT Ceramics
 (prosthetic **implants**; biodegradable implant material comprising bioactive ceramic)
 IT 34346-01-5, D,L-Lactic acid-glycolic acid copolymer
 RL: DEV (Device component use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (**Bioglass** composites; biodegradable implant material comprising bioactive ceramic)

DOCUMENT NUMBER: 130:301647
TITLE: Processing of **bioceramic implants**
via fused deposition process
AUTHOR(S): Bose, Susmita; Avila, Marisol; Bandyopadhyay, Amit
CORPORATE SOURCE: School of Mechanical and Materials Engineering,
Washington State University, Pullman, WA, 99164-2920,
USA
SOURCE: Solid Freeform Fabrication Symposium Proceedings
(1998) 629-636
CODEN: SFFPF4; ISSN: 1053-2153
PUBLISHER: University of Texas at Austin
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Processing of **bioceramic implants** via fused deposition process
AB Porous ceramic structures have long been a subject of investigation as bone substitute. Most of these porous structures are typically made by techniques that result randomly arranged pores with a wide variety of pore sizes. In recent years, SFF methods are being used for the fabrication of porous **bioceramic implants**. Porous ceramic structures were fabricated using indirect route where a polymeric mold is first created via fused deposition process. The mold was then infiltrated with ceramic slurry, dried and then subjected to a binder burn out and sintering cycle. In this paper, processing of 3D honeycomb porous alumina ceramic structures and some initial mech. properties for **bone implants** will be discussed.
ST processing **bioceramic** implant fused deposition; ceramic implant fused deposition processing
IT Bone
(artificial; processing of **bioceramic implants** via fused deposition process)
IT Prosthetic materials and Prosthetics
(ceramic, **implants**; processing of **bioceramic implants** via fused deposition process)
IT Shear
Sintering
Viscosity
(processing of **bioceramic implants** via fused deposition process)
IT Polymers, biological studies
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(processing of **bioceramic implants** via fused deposition process)
IT Ceramics
(prosthetic **implants**; processing of **bioceramic implants** via fused deposition process)
IT 1309-48-4, Magnesium oxide (MgO), biological studies 1344-28-1, Alumina, biological studies
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(processing of **bioceramic implants** via fused deposition process)
L13 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:286407 CAPLUS
DOCUMENT NUMBER: 126:268549
TITLE: Osteosynthetic material, composited implant material, and process for preparing the same
INVENTOR(S): Shikinami, Yasuo; Okuno, Masaki

PATENT ASSIGNEE(S): Takiron Co., Ltd., Japan; Shikinami, Yasuo; Okuno, Masaki
 SOURCE: PCT Int. Appl., 104 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9710010	A1	19970320	WO 1996-JP2642	19960913
W: AU, CA, CN, KR, NO, US RW: AT, CH, DE, DK, ES, FI, FR, GB, IT, NL, SE				
JP 09135892	A2	19970527	JP 1996-216874	19960731
JP 3215046	B2	20011002		
JP 09234242	A2	19970909	JP 1996-216875	19960731
JP 3215047	B2	20011002		
JP 09234243	A2	19970909	JP 1996-216876	19960731
JP 3239127	B2	20011217		
JP 11226111	A2	19990824	JP 1998-321413	19960731
JP 2002325832	A2	20021112	JP 2002-129488	19960731
CA 2205231	AA	19970320	CA 1996-2205231	19960913
AU 9669453	A1	19970401	AU 1996-69453	19960913
AU 715915	B2	20000210		
EP 795336	A1	19970917	EP 1996-930407	19960913
R: AT, CH, DE, DK, ES, FI, FR, GB, IT, LI, NL, SE				
CN 1168105	A	19971217	CN 1996-191435	19960913
NO 9702191	A	19970714	NO 1997-2191	19970513
US 5981619	A	19991109	US 1997-849422	19970514
PRIORITY APPLN. INFO.:			JP 1995-262353	A 19950914
			JP 1995-351503	A 19951225
			JP 1995-351504	A 19951225
			JP 1996-216874	A 19960731
			JP 1996-216875	A 19960731
			JP 1996-216876	A 19960731
			JP 1998-321413	A3 19960731
			WO 1996-JP2642	W 19960913

AB The inventions relate to a high-bending-strength and high-d. osteosynthetic material and a high-strength implant material, comprising either a biodegradable and bioabsorbable cryst. thermoplastic polymer material or a composite material comprising the above polymer material and a bioceramic powder having a particle diam. of 0.2 to 50 .mu.m dispersed therein, wherein crystals of the polymer material are pressure-oriented essentially parallel to a plurality of ref. axes rather than uniaxially; and a process for prep. the above materials by pressure orientation, comprising prep. either a biodegradable and bioabsorbable cryst. thermoplastic polymer material or a mixt. comprising a dispersion of a biodegradable and bioabsorbable cryst. thermoplastic polymer material and a dispersion of a bioceramic powder, melt-forming the mixt. into a preform, and pressure filling the preform into a cavity of a closed mold to prep. an oriented form. This process enables the prepn. of ideal biomaterials, i.e., an osteosynthetic material and an implant material comprising an oriented form with crystals oriented parallel to a plurality of ref. axes and possessing low anisotropy, high denseness, and high strength, which have suitable hydrolyzability, can retain satisfactory strength for a period of time necessary for bone coaptation and, after the recovery of the fractured portion, is degraded and adsorbed at such a rate as will not cause any inflammation, thus eliminating the need to conduct reoperation.

ST osteosynthetic compositd implant material; thermoplastic bioceramic prosthetic implant

IT **Bone**
 Bone
 (**implant**; osteosynthetic material, composited implant material, and process for prep. the same)
IT Dental materials and appliances
 Prosthetic materials and Prosthetics
 (**implants**; osteosynthetic material, composited implant material, and process for prep. the same)
IT 1306-01-0, Tetracalcium phosphate 1306-06-5, Hydroxyapatite 7757-93-9, Dicalcium phosphate 7758-87-4, Tricalcium phosphate 13767-12-9, Octacalcium phosphate 26100-51-6, Lactic acid **polymer** 34346-01-5, Lactic acid-glycolic acid copolymer
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (osteosynthetic material, composited implant material, and process for prep. the same)

L13 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:516451 CAPLUS
DOCUMENT NUMBER: 131:262576
TITLE: A **polymer-bioceramic** composite for filling bone defects
AUTHOR(S): Rozhnova, R. A.; Galatenko, N. A.; Khrinov'skii, V. O.; Gripenko, V. P.; Lebedev, S. V.
CORPORATE SOURCE: Inst. Khim. Vysokomol. Spoluk, Kiev, Ukraine
SOURCE: Dopovidi Natsional'noi Akademii Nauk Ukrainskoi (1997), (12), 146-149
CODEN: DNAUFL; ISSN: 1025-6415
PUBLISHER: Prezidiya Natsional'noi Akademii Nauk Ukrainskoi
DOCUMENT TYPE: Journal
LANGUAGE: Ukrainian

TI A **polymer-bioceramic** composite for filling bone defects
AB **Polymer** compns. based on polyurethane-contg. hydroxyapatite and the immunomodulator levamisole are developed. Physicochemical properties of the compns. obtained indicate the possibility of their use as **implants** for bone tissues.

ST **bone implant polymer** composite
bioceramic

IT Ceramics
 (biocompatible; **polymer-bioceramic** composite for filling bone defects)

IT Polyurethanes, biological studies
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (composites; **polymer-bioceramic** composite for filling bone defects)

IT **Bone**
 (**implant**; **polymer-bioceramic** composite for filling bone defects)

IT Ceramic composites
 (**polymer-bioceramic** composite for filling bone defects)

IT 1306-06-5D, Hydroxyapatite, composites
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (**polymer-bioceramic** composite for filling bone defects)

L13 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:618183 CAPLUS
DOCUMENT NUMBER: 123:17977
TITLE: **implants** containing recombinant human bone

INVENTOR(S): Takaoka, Kunio; Myamoto, Nobuhira
PATENT ASSIGNEE(S): Yamanouchi Pharma Co Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 07088174	A2	19950404	JP 1993-264230	19930928
TI	implants containing recombinant human bone morphogenetic protein (rhBMP) for promoting osteogenesis				
AB	Implants for promoting osteogenesis are prep'd. contg. at least (1) atelocollagen, polymers or copolymers of lactic acid and/or glycolic acid, or block copolymer of polyethylene glycol and the polymer or copolymer, and (2) recombinant human bone morphogenetic protein (rhBMP).				
IT	Glass fibers, biological studies RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (CPSA; implants contg. recombinant human bone none morphogenetic protein (rhBMP) for promoting osteogenesis)				
IT	Bone (formation; implants contg. recombinant human bone none morphogenetic protein (rhBMP) for promoting osteogenesis)				
IT	Glass ceramics (implants contg. recombinant human bone none morphogenetic protein (rhBMP) for promoting osteogenesis)				
IT	Collagens, biological studies RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (atelo-, implants contg. recombinant human bone none morphogenetic protein (rhBMP) for promoting osteogenesis)				
IT	Glass, oxide RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (beads, porous, implants contg. recombinant human bone none morphogenetic protein (rhBMP) for promoting osteogenesis)				
IT	Animal growth regulators RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (bone morphogenetic protein 2, implants contg. recombinant human bone none morphogenetic protein (rhBMP) for promoting osteogenesis)				
IT	Animal growth regulators RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (bone morphogenetic protein 2B, implants contg. recombinant human bone none morphogenetic protein (rhBMP) for promoting osteogenesis)				
IT	Animal growth regulators RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (bone morphogenetic protein 3, implants contg. recombinant human bone none morphogenetic protein (rhBMP) for promoting osteogenesis)				
IT	Animal growth regulators RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)				

(bone morphogenetic protein 5, **implants** contg. recombinant human bone none morphogenetic protein (rhBMP) for promoting osteogenesis)

IT Animal growth regulators
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(bone morphogenetic protein 8, **implants** contg. recombinant human bone none morphogenetic protein (rhBMP) for promoting osteogenesis)

IT Animal growth regulators
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(bone morphogenetic proteins, **implants** contg. recombinant human bone none morphogenetic protein (rhBMP) for promoting osteogenesis)

IT **Bone**
(**implant**, **implants** contg. recombinant human bone none morphogenetic protein (rhBMP) for promoting osteogenesis)

IT Prosthetic materials and Prosthetics
(**implants**, **implants** contg. recombinant human bone none morphogenetic protein (rhBMP) for promoting osteogenesis)

IT 7631-86-9, Silica, biological studies
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Carbonated or nitrated; **implants** contg. recombinant human bone none morphogenetic protein (rhBMP) for promoting osteogenesis)

IT 50-21-5D, Lactic acid, **polymers** or copolymers 79-14-1, Glycolic acid, biological studies 107-21-1D, Ethylene glycol, **polymers** or copolymers 1306-06-5, Hydroxyapatite 1314-23-4, Zirconia, biological studies 1317-82-4, Sapphire 1344-28-1, Alumina, biological studies 7440-44-0, Carbon, biological studies 7758-87-4, Tricalcium phosphate 11114-92-4 12597-68-1, Stainless steel, biological studies 13463-67-7, Titania, biological studies 80294-22-0, Ceravital 117563-96-9 125199-10-2, **Bioceramics**
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**implants** contg. recombinant human bone none morphogenetic protein (rhBMP) for promoting osteogenesis)

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- 1. 20020169452. 14 May 01. 14 Nov 02. Minimally traumatic surgical device for tissue treatment. Tormala, Pertti, et al. 606/72; A61B017/84.
- 2. 20020058966. 02 Jul 97. 16 May 02. SURGICAL FASTNER FOR TISSUE TREATMENT. TORMALA, PERTTI, et al. 606/213; 606/72 A61B017/56.
- 3. 20010004693. 03 Apr 98. 21 Jun 01. ANATOMICAL FIXATION IMPLANT. BURKHEAD, W., et al. 606/73; 606/72 A61B017/58.
- 4. 6406498. 04 Sep 98; 18 Jun 02. Bioactive, bioabsorbable surgical composite material. Tormala; Pertti, et al. 623/23.75; 623/11.11. A61F002/36.
- 5. 6398814. 14 Sep 98; 04 Jun 02. Bioabsorbable two-dimensional multi-layer composite device and a method of manufacturing same. Paasimaa; Senja, et al. 623/23.51; 623/23.52. A61F002/36.
- 6. 6369215. 19 Aug 99; 09 Apr 02. Hydroxyalkylated starch ester and preparation and use thereof. Peltonen; Soili, et al. 536/108; 536/102 536/107 536/110 536/124. C08B031/02 C08B031/16 C08B037/00 C08B031/00 C07H001/00.
- 7. 6350284. 14 Sep 98; 26 Feb 02. Bioabsorbable, layered composite material for guided bone tissue regeneration. Tormala; Pertti, et al. 623/17.19; 623/16.11. A61F002/44.
- 8. 6296641. 03 Apr 98; 02 Oct 01. Anatomical fixation implant. Burkhead; W., et al. 606/61; 606/213. A61B017/56.
- 9. 6277393. 10 Dec 99; 21 Aug 01. Systemic and/or local (topical) application of tetracycline and/or tetracycline derivative(s) for treating, suppressing and preventing of cerebrovascular diseases, traumas and damages of nervous system. Yrjanheikki; Juha, et al. 424/426; 424/408 424/489. A61F002/00 A01N025/34 A61K009/14.
- 10. 6228111. 07 Aug 98; 08 May 01. Biodegradable implant manufactured of polymer-based material and a method for manufacturing the same. Tormala ; Pertti, et al. 623/1.38; 424/426 424/428 604/890.1 623/23.75. A61F002/06.
- 11. 6221075. 06 Mar 98; 24 Apr 01. Bioabsorbable, deformable fixation plate. Tormala; Pertti, et al. 606/77; 606/69. A61B017/80.
- 12. 6171338. 06 Sep 94; 09 Jan 01. Biodegradable surgical implants and devices. Talja; Martti, et al. 623/1.22;. A61F002/02.
- 13. 6113640. 11 Jun 97; 05 Sep 00. Reconstructive bioabsorbable joint prosthesis. Tormala ; Pertti, et al. 623/18.11; 606/151 623/21.15 623/23.75. A61F002/30.
- 14. 6015410. 23 Dec 97; 18 Jan 00. Bioabsorbable surgical implants for endoscopic soft tissue suspension procedure. Tormala ; Pertti, et al. 606/73;. A61B017/00.

15. 6007580. 11 Mar 98; 28 Dec 99. Joint prosthesis. Lehto; Matti, et al. 623/21.11; 623/18.11. A61F002/42.

16. 6001100. 19 Aug 97; 14 Dec 99. Bone block fixation implant. Sherman; Mark, et al. 606/72; 606/73 606/74 606/75 606/77 623/13.14. A61B017/56.

17. 5984966. 02 Mar 98; 16 Nov 99. Bioabsorbable bone block fixation implant. Kiema; Pia, et al. 623/13.14; A61F002/08.

18. 5792400. 04 Oct 95; 11 Aug 98. Method of manufacturing biodegradable surgical implants and devices. Talja; Martti, et al. 264/103; 264/147 264/210.2 264/288.4. D02G003/00.

19. 5084051. 24 Aug 88; 28 Jan 92. Layered surgical biocomposite material. Tormala; Pertti, et al. 606/77; 428/688 606/76. A61F002/00.

20. 4863472. 05 Jul 88; 05 Sep 89. Bone graft implant. Tormala; Pertti, et al. 623/23.58; 433/201.1. A61F002/28 A61C008/00.

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